Saskatchewan
Alcohol and
Drug Abuse
Commission

Suicide in Saskatchewan:

The Alcohol and Drug Connection

1988

Research from *SADAC*

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SADAC Research Report

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Preface

SADAC is pleased to present this report Suicide in Saskatchewan: The Alcohol and Drug Connection.

Our investigation into suicide and substance abuse began in 1986, as part of new provincial initiatives on alcohol and drug abuse, and in response to requests from the public for information. The extent of alcohol and drug use in suicide is one of our most frequently asked questions; concern about youth and suicide, in particular, is often expressed by parents, teachers and other care-givers.

Suicide is tragic, and is a concern shared by all members of the community. Suicide prevention must be a special priority to all professionals working in the human service field.

The relationship between suicide and substance abuse is undeniable. SADAC has undertaken this research because we believe that learning more about the nature of this relationship will help to make us more effective in preventing suicide.

We wish to acknowledge the assistance of the office of the Provincial Coroner. Without the co-operation and expertise provided by the Coroner and staff, our research would not have been possible. The contents of the study are, however, solely the responsibility of SADAC.

SADAC Research Report

Suicide in Saskatchewan: The Alcohol and Drug Connection

Report Highlights

- there were 133 suicides in 1985 and 139 in 1986 in Saskatchewan;

- 43% of suicides were by gunshot, 17% by hanging, 16% by drug overdose and 13% by carbon monoxide poisoning;

- the relationship between alcohol, drugs and suicide is complex: while substance abuse and suicide are strongly associated, association does not necessarily imply cause; at one level substances may only supply the courage or the tool required for an act that otherwise has no other substance abuse implications; at another level, substance abuse may represent an integral part of a victim's inability to find a way of coping with life;

- 20% of the victims had long-term or chronic problems with alcohol; an additional 19% had acute (over .08% mg.) levels of alcohol in their blood at the time of death; and 8% had lower levels of alcohol at the time of death; in total close to 47% of the victims had some form of alcohol involvement:

- 67% of the suicides were connected to alcohol or drugs at some level: 29% of the victims had involvement only with alcohol; 20% only with other drugs; and 18% with both alcohol and other drugs;

- apart from alcohol, the drugs most detected were psychotherapeutic prescription drugs.

Sex

-In 1985 and 1986, there were 210 male and 62 female victims; the male suicide rate was 3 times that for females;
-drugs were a major contributor to female deaths due to the higher proportion of drug overdoses among women; 73% of female victims had involvement with drugs other than alcohol, compared to 28% of males;
-alcohol involvement was more prevalent for men; half (51%) of the male victims had some alcohol involvement, while one third (32%) of females had.

Youth

-in 1985 and 1986 there were 98 suicides among persons under the age of 30: 26 were teenagers and 72 were in their twenties;
-72% of victims in their twenties had some alcohol or drug involvement compared to 50% for teenagers;
-for both teenage victims and those in their twenties, alcohol was implicated more frequently than other drugs; 46% of the teens and 57% of twenty year-olds had involvement with alcohol.

Natives

-in 1985 and 1986 there were 56 suicide victims of Native ancestry;
-the suicide rate for residents of Indian Reserves was 3 to 4 times that of the overall Saskatchewan population; Native rates were higher for both men and women, and among all age groups;
-youth suicide constituted a much higher proportion of the total for Native victims; the suicide rate for teens and 20-29 year-old residents of Indian Reserves was approximately 5 times that for comparable ages in the general population;
-75% of Native suicides had involvement with alcohol or drugs, compared to 64% of non-Natives;
-alcohol played a more significant role in Native suicides than did other drugs; 64% of Native victims had involvement with alcohol.

SADAC Research Report

Suicide in Saskatchewan: The Alcohol and Drug Connection

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SADAC Information Request - Suicide Prevention Workshop

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Suicide in Saskatchewan: The Alcohol and Drug Connection

Chapter I

Suicide: The Problem

Suicide is tragic. In one way or another it touches many lives, yet remains painfully perplexing.

Suicide cannot be explained by one simple theory. While the act of self-destruction provides a common thread, the causes of suicide have many dimensions. Certain groups of people have been identified as being at greater risk of suicide than others. Any particular suicide, however, may be caused or triggered by a range of causes. The complexity of suicide must be recognized if it is to be prevented.

Efforts at prevention and treatment must situate suicide in the overall context of self-destructive behaviour. Other behaviours which share the self-destructive nature of suicide include: chronic alcohol and drug abuse, hyperobesity, the habitual taking of high risks, and wilful self-neglect, such as not seeking treatment for one's serious physical illnesses.

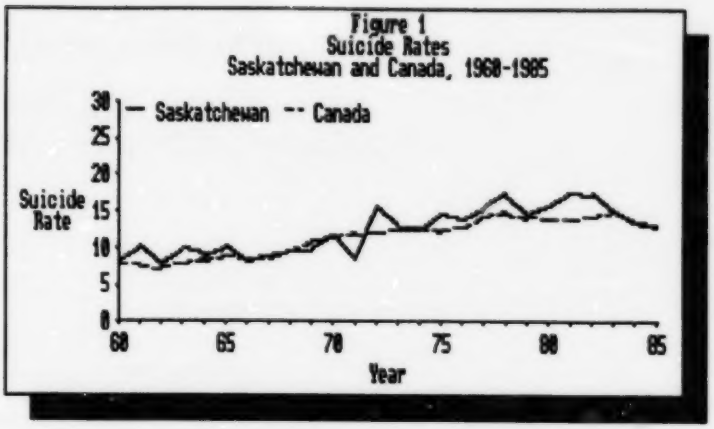
The connection between suicide and alcohol and drug abuse is undeniable; however, the precise nature and extent of the relationship has eluded researchers. In 1986, the Saskatchewan Alcohol and Drug Abuse Commission (SADAC) undertook a research study to better understand the relationship between substance abuse and suicide.

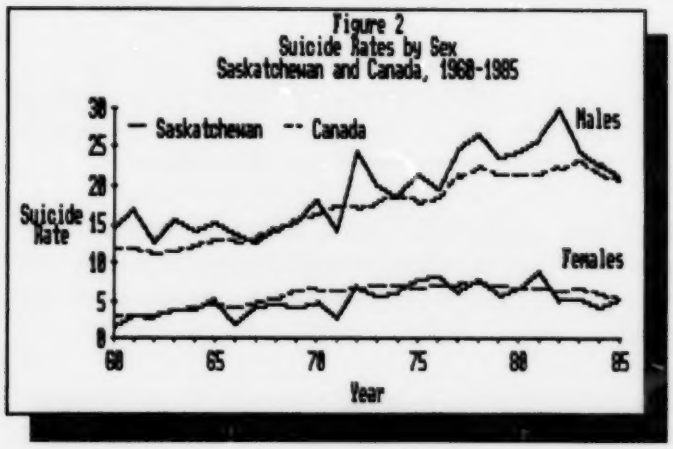
SADAC was granted special permission to investigate the case records kept by the Office of the Saskatchewan Coroner. All suicides in 1985 and 1986 were included in the study. Researchers compiled information reported by the coroners on the background of the suicide victim, particularly that pertaining to alcohol and drug abuse.

This report presents the results of that investigation, and focuses on alcohol and drug involvement in suicide. Because of the limited nature of the study, the report cannot address the broad questions regarding causes of suicide; the study's findings, however, provide further evidence of the strong implication of substance abuse in suicide.

Over the last 25 years, suicide rates in Saskatchewan, as in all of Canada, have increased dramatically. Saskatchewan rates have been higher than the Canadian rates throughout the period, although rates since 1981 appear to be decreasing.

Saskatchewan's average suicide rate for 1981-85 was third highest among the ten provinces, following Quebec and Alberta.

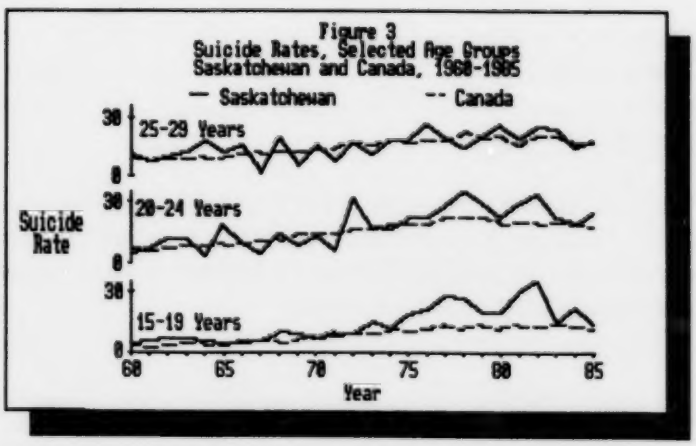




The increase in the suicide rate, both in Canada and in Saskatchewan, has taken place mainly for males. Here again, however, Saskatchewan male rates have been higher the corresponding national rates.

Saskatchewan's rates were also significantly higher for youth, in particular the age groups 15-19 years and 20-24 years.

In fact, Saskatchewan's average suicide rate for 1981-85 was highest among the ten provinces for both 15-19 year-olds and 20-24 year-olds.



Note. National historical rates are from The Report of the Task Force on Suicide in Canada (1987) and are reported as the number of suicides per 100,000 persons 15 years of age and older.

Saskatchewan Suicides, 1985-86: The Saskatchewan Coroner records 133 victims of suicide in Saskatchewan in 1985 and 139 victims in 1986. This gives Saskatchewan a rate of 13.0 suicides per 100,000 persons in 1985 and 13.6 in 1986. The increase between 1985 and 1986 is the first recorded since 1981.

Table 1
Suicide Victims and Suicide Rates
Saskatchewan 1985-86

Year	Number of Victims	Suicide Rate per 100,000 persons
1985	133	13.0
1986	139	13.6
Total	272	13.3 (average)

For the remainder of the report the data from both years will be analyzed together.

Method of Suicide: Half (51%) of male suicides in 1985-86 were by gunshot; half (48%) of female suicides were by drug overdose. Hanging was also a frequent method of suicide, representing 17% of all cases.

Table 2
Suicides by Method by Sex
Saskatchewan, 1985-86

Method of Suicide	Males No.	Males %	Females No.	Females %	Total No.	Total %
Gunshot	106	50.5%	12	19.4%	118	43.4%
Hanging	38	18.1%	9	14.5%	47	17.3%
Drug Overdose	13	6.2%	30	48.4%	43	15.8%
Carbon Monoxide	28	13.3%	6	9.7%	34	12.5%
Other	25	11.9%	5	8.1%	30	11.0%
Total Suicides	210	100.0%	62	100.0%	272	100.0%

Age of Victims: The two youngest victims of suicide in the 2 years covered by the study were 14 years old; one committed suicide in 1985 and one in 1986. In total, 26 teenagers committed suicide during the 2-year period. The 15-19 year-old rate was 15.0 suicides per 100,000. This is lower than the suicide rate of 17.5 for all victims 15 years and over.

The 20-29 year age group had the highest rate: 19.5 suicides per 100,000 persons; the mid-age grouping of 30-64 year-olds had a rate of 18.2.

The elderly (65 years and over) had a suicide rate of 14.1. The oldest victim of suicide in Saskatchewan in 1985 and 1986 was 87.

Sex of Victims: During the 2 study years, 210 men and 62 women committed suicide. Over three quarters (77%) of the victims were male. The male suicide rate of 27.3 suicides per 100,000 persons 15 years and over was more than triple the female rate of 7.9. Female victims tended to be older than male victims.

Table 3
Suicides by Age and Sex
Saskatchewan, 1985-86

	Number of Suicides			Suicide Rate per 100,000 persons per year		
Age Group	Males	Females	Total	Males	Females	Total
14 years	1	1	2	--	--	--
15-19 years	20	4	24	24.3	5.2	15.0
20-29 years	63	9	72	33.7	4.9	19.5
30-64 years	101	37	138	26.4	9.8	18.2
65 years & over	25	11	36	21.8	7.9	14.1
Total	210	62	272	20.6	6.1	13.3
Total - 15 years & over	209	61	270	27.3	7.9	17.5

Limitations of the Data: The Saskatchewan Suicide Study is based on reports from coroners' investigations conducted where the cause of death is considered suspicious. The purpose of these investigations is legal; an investigation and report for the coroner's purposes need only be as extensive as required to legally establish the identity of the deceased, and the date, location and medical cause of death. In Saskatchewan, a toxicology report is a common procedure; therefore, data on the cause of death and the presence of alcohol or drugs in the body of the deceased were available in most cases. On the other hand, data on the psychological, social and economic circumstances of the victim were in many cases incomplete or absent. In addition, the data may have been biased toward "self-selecting" characteristics, that is, those more readily noticed.

Chapter II

The Alcohol and Drug Connection

1. The Nature and Extent of Alcohol/Drug Involvement

1.1 Association not Cause

Substance abuse and suicide are strongly associated; however, association does not necessarily imply cause. Various views prevail on the nature of this association, especially about alcohol abuse and suicide.

One view describes alcoholism itself as a form of chronic suicide and as evidence of more general self-destructive tendencies. Alcohol abuse may be seen as a "suicide equivalent", a substitute for a quicker method of suicide. (Haberman, 1978).

The Task Force on Suicide in Canada (1987) summarizes 3 views of the relationship between alcoholism and suicide:

(a) alcoholism is a cause of suicide;
(b) alcoholism is a form of suicide; and
(c) alcoholism and suicide are manifestations of a single cause. (p. 28)

One study of suicide divides the factors contributing to suicide into 2 groups: predisposing and precipitating factors. Predisposing factors are conditions which have developed over time, and set the stage for suicide: history of mental disorder, drug and alcohol problems and chronic physical conditions. Precipitating factors are the triggering mechanisms of suicide: mental health crisis, perceived failures and loss/bereavement (Boldt and Solomon, 1977). According to these researchers, substance abuse contributes to suicide in the long term rather than in the short term.

On the other hand, some consider drinking as a defense against suicide, that is, a means by which a person attempts to defend him/herself from suicidal feelings.

The debate over the exact relationship between alcohol and suicide will continue; the connection itself, however, is undeniable. Judith Carle (1985) in summarizing the literature states that up to 1/5 of alcoholics eventually commit suicide. The Task Force on Suicide in Canada (1987) cites estimates ranging from 10 - 40% of alcoholics committing suicide; conversely, up to 30% of persons who commit suicide are alcoholics. Skog (1986) has reported that some studies show that half of all cases of suicide and attempted suicide involve alcohol intoxication. The alcohol/suicide connection is even stronger for suicide among Native people (FSIN, 1985).

While there is considerable definitional looseness in many of these studies (i.e. what constitutes intoxication, alcohol abuse, alcoholism etc.) the correlation between alcohol and suicide cannot be denied.

The Saskatchewan Suicide Study: The presence of alcohol or other drugs, licit or illicit, in the body of a suicide victim does not necessarily imply substance abuse. One indicator of abuse may be the detection of a substance at a high level; however, with drug overdose victims, the high level of drugs found may not imply a pattern of substance abuse, but be related only to the method of suicide. Conversely, there are cases where substance abuse was a part of the victim's life but where no drugs were detected at the time of suicide.

In the Saskatchewan Suicide Study, as much information as possible about the victim and his/her pattern of alcohol and drug use was extracted from the coroners' reports. Data on the presence of alcohol and drugs in the body were available from the toxicology report, or, in some cases where no toxicology was performed, from the coroners' conclusions. Counted were all psychotropics (tranquillizers, antidepressants and sedative/hypnotics), analgesics (narcotic and non-narcotic), antihistamines, cannabis, stimulants, and inhalants. (In one case, the presence of a cardiovascular drug, Oxprenolol HCL, was included because it was an overdose of this drug which the coroner concluded effected the suicide.)

In addition to documenting the presence of alcohol and drugs, the study also documented any background of heavy drinking or drug abuse, including dependence on prescription drugs. However, the study provides only a conservative indication of the number of cases with histories of substance abuse, because it includes only those cases where such a history was detected and documented.

A distinction was made in the study as to whether the substance abuse was chronic, that is, part of the victim's life history or whether it was more recent, such as only a few days or a week preceding the suicide.

1.2 Alcohol Involvement

Victims for whom alcohol involvement was detected were divided into 3 groups, based on the information available. In Group 1, Chronic Involvement, were those for whom a history of heavy drinking or chronic alcohol problems was documented. In Groups 2 and 3 were those for whom no chronic abuse was documented, but more recent evidence of involvement was present. Victims of Group 2, Acute Involvement, had blood alcohol levels of greater than .08% mg. at the time of death; victims of Group 3, Lesser Involvement, had lower levels.

Group 1 represented 20% of the victims; Group 2, 19%; and Group 3, 8%. In all, victims with alcohol involvement represented 46% of the total.

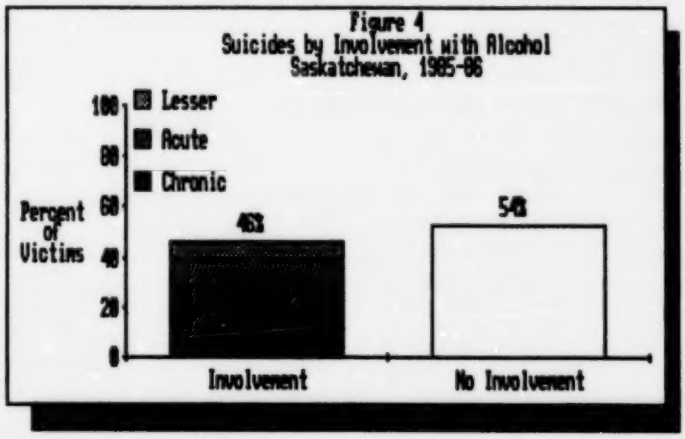


Table 4
Suicides by Involvement with Alcohol
Saskatchewan, 1985-86

Degree of Involvement	Males No.	Males %	Females No.	Females %	Total No.	Total %
Chronic Involvement	44	21.0%	9	14.5%	53	19.5%
Acute Involvement	44	21.0%	7	11.3%	51	18.8%
Lesser Involvement	18	8.6%	4	6.5%	22	8.1%
Total with Involvement	106	50.5%	20	32.3%	126	46.3%
No Involvement Detected	104	49.5%	42	67.7%	146	53.7%
Total Victims	210	100.0%	62	100.0%	272	100.0%

Males had a higher proportion of alcohol involvement than females; half (51%) the males had some alcohol involvement while one third (32%) of females had.

1.3 Involvement with Drugs Other Than Alcohol

Victims for whom involvement with drugs was detected were also divided into 3 groups. In Group 1, Chronic Involvement, were those for whom chronic use of drugs was documented (including some drug overdoses). In Groups 2 and 3 were those for whom no chronic use was documented but where evidence of more recent involvement was present. Victims of Group 2, Acute Involvement, were those who had consumed lethal levels of drugs (drug overdoses, with no documented history of previous drug use); victims of Group 3, Lesser Involvement, had consumed non-lethal levels of drugs.

Group 1 represented 17% of the victims; Group 2, 10%; and Group 3, 11%. In all, victims with some drug involvement represented 38% of the total.

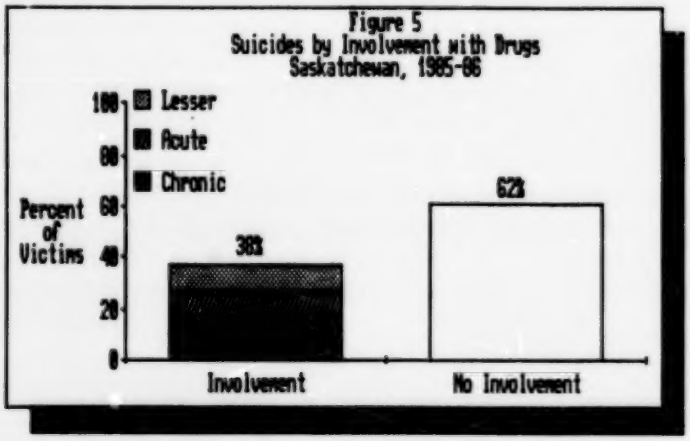


Table 5
Suicides by Involvement with Drugs Other Than Alcohol
Saskatchewan, 1985-86

	Males		Females		Total	
Degree of Involvement	No.	%	No.	%	No.	%
Chronic Involvement	24	11.4%	22	35.5%	46	16.9%
Acute Involvement	10	4.8%	17	27.4%	27	9.9%
Lesser Involvement	24	11.4%	6	9.7%	30	11.0%
Total with Involvement	58	27.6%	45	72.6%	103	37.9%
No Involvement Detected	152	72.4%	17	27.4%	169	62.1%
Total Victims	210	100.0%	62	100.0%	272	100.0%

Females had a higher proportion of drug involvement than males, 73% as compared to 28%; this corresponds to the higher frequency of drug overdoses among the female victims.

Drug Overdoses: Of the 43 victims who committed suicide by drug overdose in the period covered by the study, 16 had a history of chronic drug use, 5 of whom also had a history of chronic alcohol abuse. Altogether, 12 of the overdose victims had a history of chronic involvement with alcohol. An additional 8 had high blood-alcohol levels (acute alcohol involvement) at the time of suicide; 3 had lesser involvement with alcohol. Twenty drug overdose victims had no involvement with alcohol.

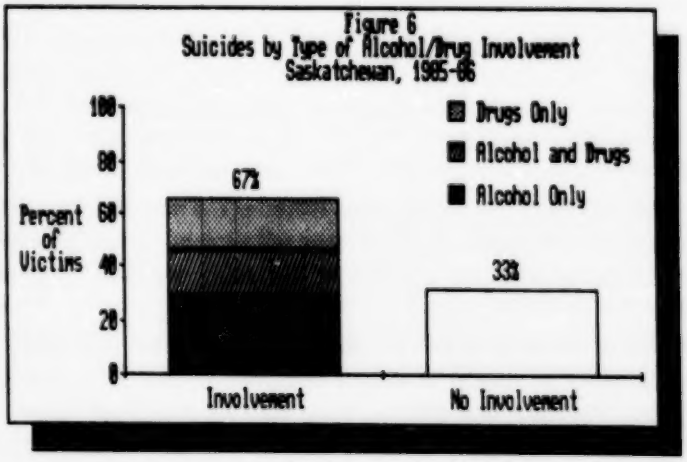
Drug Types: The types of drugs detected were: psychotherapeutic agents, antihistamines, analgesics, cannabis, stimulants, and inhalants. No hallucinogens were detected. Psychotherapeutic agents were involved in over 60% of the drug-identified cases, mainly anti-depressants and a significant number of sedative-hypnotics. Many victims had taken more than one type of drug. Cannabis, Inhalants and Stimulants were used by 13 victims: 7 victims had used cannabis, and 6 had used inhalants (5 nail polish remover and 1 gasoline fluid). Two victims had used stimulants - one had used large quantities of caffeine in combination with narcotics and non-narcotic analgesics. The other stimulant detected was fenfluramine.

Psychotherapeutic Drugs: Research on the association between suicide and drugs other than alcohol is relatively sparse. However, the use of psychotherapeutics is related to mental illness, and the association between mental illness and suicide is well documented (Ennis, 1983; Task Force, 1987; Skog, 1986). Research suggests a high proportion of persons who commit suicide visit their doctor just prior to their death (Ennis, 1983; Task Force, 1987). However, the connection between suicide and prescriptions provided to treat mental illness, or prescriptions provided during physician visits immediately prior to suicide, has received remarkably little scrutiny. Ennis (1983) makes brief reference to the "physician's dilemma" - the ethical bind physicians are in when they prescribe chemotherapies to help their patients but which may very well represent the suicide instrument. Further, Ennis references a study in which "half of the patients had obtained from only one physician the psychotropic medication with which they killed themselves" (p.23).

The present study also found a strong connection between prescription drugs and suicide which may support Ennis' call for "a conservative approach to prescribing psychotropic agents for potentially suicidal individuals", a call made on the basis of the observation "that the availability of the means of suicide is related to changes in the rate of suicide" (p.23).

1.4 Summary - Alcohol and Other Drug Involvement

In summary, findings revealed that in 1985 and 1986 two-thirds (67%) of the victims had experienced some form of involvement with alcohol or other drugs: 29% only with alcohol; 18% with both alcohol and other drugs; and 20% with other drugs only. This involvement was either chronic involvement or more recent use, or both.



1.5 Other Factors

As discussed above, substance abuse is only one of many potential contributors to suicide. Although the extent of information from the Provincial Coroner's records on the background of the suicide victims varied greatly, all explanations for the suicide, including any references to previous mental health problems, were collected.

Perceived Reason for Suicide: A reason, or precipitating factor, for committing suicide was identified in close to 80% of the cases. In some cases, a combination of factors was provided.

Table 6
Reasons Identified for Suicide
Saskatchewan, 1985-86

Reason	Males Frequency	Males %	Females Frequency	Females %	Total Frequency	Total %
Mental Health Problems	78	37.7%	34	52.3%	112	41.2%
Family/Relationship Problems	53	25.6%	14	21.5%	67	24.6%
Medical Problems	19	9.2%	10	15.4%	29	10.7%
Financial Problems	24	11.6%	1	1.5%	25	9.2%
Bereavement	14	6.8%	3	4.6%	17	6.3%
Legal Problems	13	6.3%	-	0.0%	13	4.8%
Other Reasons	6	2.9%	3	4.6%	9	3.3%
Total Reasons Identified	207	100.0%	65	100.0%	272	100.0%

Note: There could be more than one reason per victim.
Total Victims with Identified Reasons: Males-158; Females-52.

Men and Women: The male suicide rate of 27.3 suicides per 100,000 persons 15 years and over was over 3 times the rate of 7.9 for females. However, studies have shown that three times more women than men attempt suicide. Flack (1986) explains that most of this "success/failure disparity" is the result of method:

"the majority of young men use firearms; the majority of young women employ drugs or gases. The failures in the latter group are thus predictable for a number of reasons ... The successes of the former group need little explanation: the means are more effective, more deadly" (p.9).

Regardless of gender, most suicide attempters fail. This phenomenon has led some researchers to suggest that suicide attempt is a misnomer, insofar as attempted suicide carries little intent to die and, therefore, is a different thing than suicide (Task Force, 1987, p.3). The theory that suicides and suicide attempts are quite different phenomena has led some researchers to try to capture this concept in the terminology employed - suicide attempt has been variously called "parasuicide", "indirect self-destructive behaviour" (Farberow, 1980) and "subintentional death" (Shneidman, 1973).

Whatever the explanation, a "success/failure disparity" exists between the sexes: women attempt suicide more often than men; men commit suicide more often than women.

Study findings revealed that 19% of female victims, compared to 10% of males, had previously attempted suicide. In addition, a higher proportion of females (23%) than males (16%) had expressed their intention to commit suicide, and proportionately more females (47%) than males (23%) had previous known contacts with "helping" agencies.

Among the reasons the study identified for the suicide, mental health problems and family/relationship problems were dominant among both males and females. However, mental health problems represented a much higher proportion among the female victims. Medical problems were also relatively more prevalent among the female victims.

Mental Illness: Research has shown that the risk of suicide is higher among persons suffering from mental illness. The Task Force on Suicide in Canada (1987) reported that 50 - 90% of people who commit suicide suffer from a diagnosable mental disorder (p.27). However, the SADAC study was not able to evaluate, based on the coroners' records, whether victims suffered from "diagnosable" mental disorders.

Social Factors: The social nature of suicide is presented implicitly throughout this report: the relationship of suicide to age, sex, ancestry and alcohol abuse implies that particular social groups are more or less likely to attempt self-harm. The implication is that the common social environment in which particular groups of people are situated may be related to that group's propensity to self-harm.

Family Factors: Marital and family factors often play a part in suicide. Suicide rates are generally higher among divorced persons than among married persons. For women, however, marriage is positively related to suicide, suggesting that marriage may act as a protective agent more for males than females (Task Force, p.22). Large families and single parent families are negatively correlated with suicide; childlessness and non-family households are positively correlated with suicide (Sakinofsky and Roberts, 1985).

Unfortunately, the Provincial Coroner's records rarely contained information about family and household structure. The SADAC study, therefore, could not explore this area in any depth. Data on marital status were often partially recorded and tended to overestimate the number of married victims. Even so, the data confirmed other research findings: the suicide rate for those who were widowed, separated, or divorced (29.3 per 100,000) was more than double the rate for those married or in a common law relationship (12.0). The suicide rate for single victims (15 years and over) was also high: 24.9. In addition, the suicide rate for married/common law women was slightly higher than for single women, in contrast to men, for whom the married rate was much lower than the single rate.

Table 7
Suicide Victims by Marital Status
Saskatchewan, 1985-86

Marital Status	Number of Suicides			Suicide Rate per 100,000 persons per year		
	Males	Females	Total	Males	Females	Total
Victims 15 years & Over	209	61	270	27.3	7.9	17.5
Single	73	8	81	38.4	6.1	24.9
Married/Common Law	61	27	88	16.4	7.6	12.0
Widowed/Separated/Divorced	30	11	41	74.8	11.3	29.3
Marital Status Unknown	45	15	60			

Note: The suicide rate has been estimated by proportionally assigning the 60 cases (22% of the total) with missing data to the marital status categories.

Socioeconomic Factors: Ritson (1977) states that "suicide attempts in general are inversely related to social class." The Task Force on Suicide in Canada (1987) reports a relationship between career difficulties, "downward intragenerational mobility" and "developmental stagnation" and suicide, particularly for men. The Task Force also reports that although the evidence is somewhat conflicting, there appears to be a relationship between unemployment and suicide. One study (Brenner & Mooney, 1981) found that a 1% increase in the unemployment rate is associated with a 4 - 5% increase in homicides and suicides. This association seems to hold for newly rather than chronically unemployed people.

The SADAC Suicide Study was unable to explore the relationship between socioeconomic status and suicide because financial and employment details are not normally recorded as part of coroners' investigations. However, the high rate of Native suicides (see below) found in the SADAC study may be one indicator of a relationship between suicide and low socioeconomic status.

Social Disorganization/Isolation: The Task Force on Suicide in Canada (1987) cites evidence suggesting a positive correlation between suicide and social disorganization. The Task Force defines social disorganization as an environment of transiency, criminality, low-quality housing, alcohol and drug abuse and other undesirable social conditions. Disorganization of this sort is exhibited by particular groups marginalized by long term unemployment and isolation from the economic fabric of the larger society. Similarly, social isolation is the result of an individual's isolation from primary institutions - without family, friendless and unemployed. While the SADAC study could not obtain indicators of isolation and disorganization, one case in point is the Native community: they are generally recognized to be experiencing such undesirable social conditions, and their suicide rates are very high (see below).

In summary, there appears to be a relationship between isolation from major social institutions and suicide. A relationship appears to exist between unemployment and suicide; between low socioeconomic status and suicide; and between social disorganization/isolation and suicide.

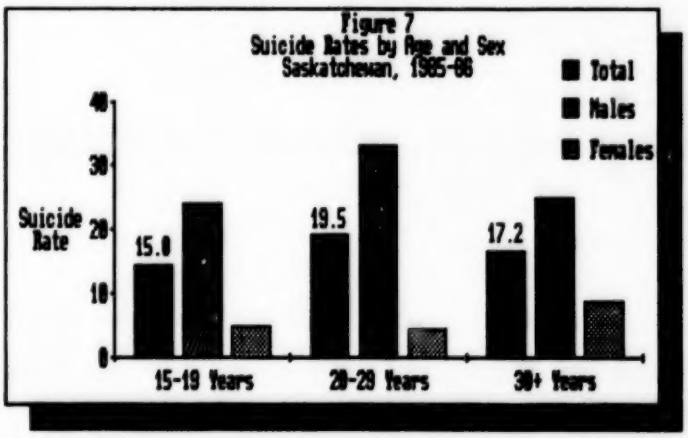
2. Youth Suicide

In recent years, SADAC has focused on youth as a target group for alcohol and drug abuse programs. Concern with youth suicide has been one aspect of this focus. Youth suicide, especially teen suicide, has been perceived as particularly tragic. Suicide has become one of the leading causes of death for young persons across Canada. As discussed above, over the last 20 years youth suicide has increased nationwide, and especially in Saskatchewan, although rates in recent years appear to be decreasing.

The Saskatchewan Suicide Study: In the 2 year period studied, there were 98 victims under the age of 30: 26 teenage suicides and 72 victims in their twenties.

The rate of teen suicide (15-19 years) was 15.0 per 100,000 persons, while the rate for those 20-29 years was 19.5. The rate for all those 30 years and over was 17.2. The 20-29 year rate was higher than the older rate; the teen rate was lower.

While all age groups had a predominance of males, the proportion of male victims was more pronounced among the younger groups. Indeed, the 20-29 year-olds were almost 90% male.



Conversely, the rate for females in the older age group was higher than that of younger females although still lower than that for males in the same age group.

Table 8
Youth Suicides by Age and Sex
Saskatchewan, 1985-86

Age Group	Number of Suicides			Suicide Rate per 100,000 persons per year		
	Males	Females	Total	Males	Females	Total
14 years	1	1	2	--	--	--
15-19 years	20	4	24	24.3	5.2	15.0
20-29 years	63	9	72	33.7	4.9	19.5
30 years & over	126	48	174	25.4	9.3	17.2
Total - 15 years & over	209	61	270	27.3	7.9	17.5

Alcohol Involvement: The degree of alcohol involvement was comparatively higher for the younger age groups, especially for the 20-29 year-olds: 57% of 20-29 year-olds and 46% of teens had some alcohol involvement, compared to 42% of older victims. For both younger groups, the proportion of chronic involvement with alcohol was lower than for the older group. However, this may be partly attributable to the younger age itself providing less time with which to develop a long-term involvement.

Table 9
Youth Suicides and Involvement with Alcohol
Saskatchewan, 1985-86

	Youth				Older	
	Teens		20-29 Years		30+ Years	
Degree of Involvement	No.	%	No.	%	No.	%
Chronic Involvement	2	7.7%	14	19.4%	37	21.3%
Acute Involvement	7	26.9%	22	30.6%	22	12.6%
Lesser Involvement	3	11.5%	5	6.9%	14	8.1%
Total with Involvement	12	46.2%	41	56.9%	73	42.0%
No Involvement Detected	14	53.8%	31	43.1%	101	58.0%
Total Victims	26	100.0%	72	100.0%	174	100.0%

Drugs Other Than Alcohol: For both younger groups, involvement with drugs other than alcohol was less prevalent than for older victims. However, the 20-29 year-olds had a higher rate than did teens. Both chronic and acute drug involvement increased with age.

Table 10
Youth Suicides and Involvement with Drugs Other Than Alcohol
Saskatchewan, 1985-86

	Youth				Older	
	Teens		20-29 Years		30+ Years	
Degree of Involvement	No.	%	No.	%	No.	%
Chronic Involvement	2	7.7%	11	15.3%	33	19.0%
Acute Involvement	1	3.9%	6	8.3%	20	11.5%
Lesser Involvement	1	3.9%	9	12.5%	20	11.5%
Total with Involvement	4	15.4%	26	36.1%	73	42.0%
No Involvement Detected	22	84.6%	46	63.9%	101	58.0%
Total Victims	26	100.0%	72	100.0%	174	100.0%

Summary - Alcohol and Other Drug Involvement:

When alcohol and drugs are considered together, an interesting difference emerges between the two younger groups: 72% of the 20-29 year-olds had alcohol/drugs detected, compared to 50% for teens. There were also notable differences among the age groups as to whether alcohol or other drugs were the dominant substance in use. Contrary to stereotype, the importance of drugs increased with age, whereas the importance of alcohol decreased. Alcohol and drug use in combination was highest among the 20-29 year-old age group.

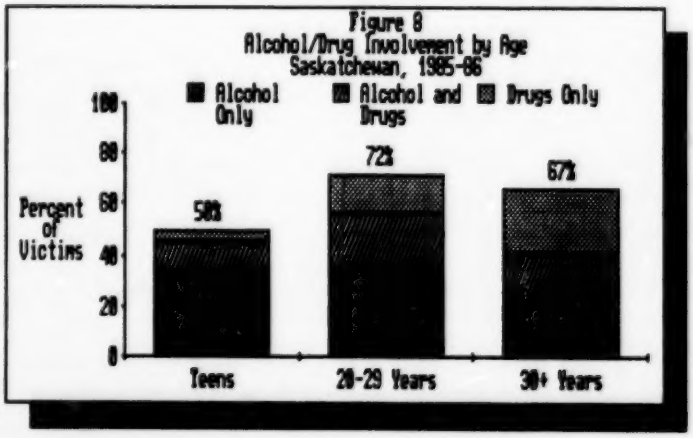


Table 11
Youth Suicides and Involvement with Alcohol and Other Drugs
Saskatchewan, 1985-86

Type of Involvement	Youth Teens	Youth 20-29 Years	Older 30+ Years
Alcohol Only	34.6%	36.1%	24.7%
Alcohol & Drugs	11.5%	20.8%	17.2%
Drugs Only	3.9%	15.3%	24.7%
Total with Involvement	50.0%	72.2%	66.7%
Total Number of Victims	26	72	174

Other Factors: Younger suicides had a much higher proportion of native suicides; in particular, the majority of teen suicides (54%) were of Native ancestry. This is discussed in more depth later in the report.

For both young age groups, and especially for teenagers, the gunshot and hanging methods of suicide tended to predominate. Indeed, for teens, over 80% of suicides were by one of these two methods. This corresponds to the predominance of males suicides among these age groups.

Among the reasons identified for the suicide, young persons, teens in particular, had a high proportion of problems with their family or a relationship (boyfriend/girlfriend). Mental health problems were more significant among the 20-29 year-old and 30+ groups. Bereavement (death of a loved one) was more significant for teenage victims.

Table 12
Reasons Identified for Suicide for Youth Victims
Saskatchewan, 1985-86

Reasons Identified	Youth		Older
	Teens	20-29 Years	30+ Years
Mental Health Problems	26.9%	42.2%	42.9%
Family/Relationship Problems	34.6%	37.5%	18.7%
Medical Problems	0%	4.7%	14.3%
Financial Problems	0%	6.3%	11.5%
Bereavement	15.4%	4.7%	5.5%
Legal Problems	7.7%	3.1%	4.9%
Other	15.4%	1.6%	2.2%
Total	100.0%	100.0%	100.0%
Total Reasons Identified	26	64	182

Note: There could be more than one reason per victim.
Total Victims with Identified Reasons: Teens-19; 20-29 yrs.-53; Older-138.

Contrary to expectation, the proportion of victims who had previously attempted suicide was higher in the younger age groups: 23% of teens had previous known attempts, compared to 15% of 20-29 year-olds, and only 9% of those 30 years and older. Only 12% of teens, as compared to 24% of 20-29 year-olds and 21% of those 30 years and older, left a suicide note. However, 27% of teens had expressed their intention to commit suicide, compared to 10% of 20-29 year-olds and 20% of those 30 years and older. On the other hand, 26% of 20-29 year-olds had exhibited a notable behaviour change before their suicide, as compared to 12% of teens and 13% of those 30 years and older.

Proportionately fewer of the younger victims had previous known contacts with "helping" agencies; in particular only 8% of the teens had, compared to 26% of the 20-29 year-olds and 32% of those 30 years and older.

3. Native Suicide

The rate of suicide and violent death among Native people is alarming. If youth suicide rates represent cause for concern, Native Indian suicide rates represent a national crisis. Studies have shown the rate of violent death (including suicide) among Indian people is much higher than for non-Indians. In Canada, Indian suicide rates generally run 3 and 4 times higher than non-Indian rates.

A study by the Federation of Saskatchewan Indian Nations (FSIN, 1985) attributes these rates to "negative psychosocial feelings and attitudes" and low socioeconomic status, which are the result of racism. (p.65)

The Task Force on Suicide in Canada (1987) concurs with the FSIN, if in different words:

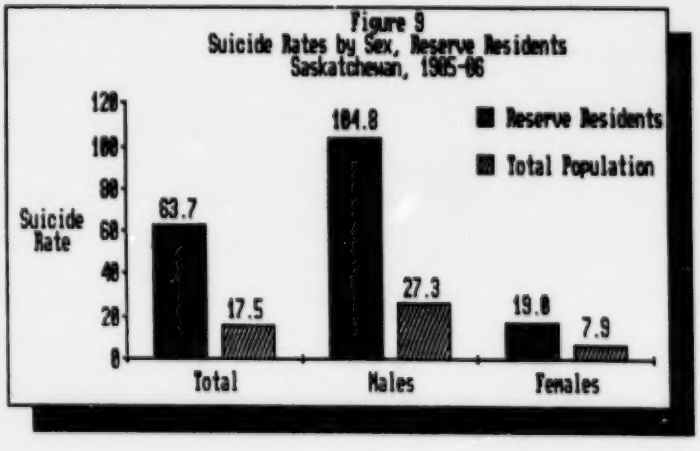
> A number of societal factors have been identified as contributing to suicidal behaviour among Native peoples. Many of these conditions have developed as a result of the difficulties of integration into the white man's society, illustrated by the many losses of the Native peoples: loss of control over their individual and collective destiny; a deterioration of traditional, cultural and religious values... the devaluation of spiritual leaders and other role models. (p.35)

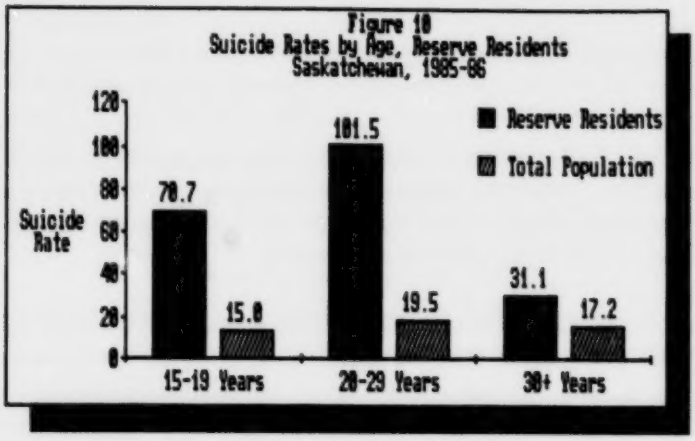
The Saskatchewan Suicide Study: Over the 2 year period covered by the SADAC study, there were 56 victims known to be of Native ancestry, representing 21% of all suicides. However, ancestry was difficult to identify from the coroner's records, as it was not always specified. As well, obtaining a rate for Native people as a group was difficult because of the unavailability of agreed-upon population data for "Natives" as a group.

However, a rate was determined for those Native victims residing on Indian Reserves. The rate for residents of reserves 15 years and over was 63.7 suicides per 100,000 persons - almost 4 times the comparable rate of 17.5 for the Saskatchewan population.

Both male and female suicide rates for reserve residents were higher than comparable ones for the Saskatchewan population. In particular, the male rate of 104.8 was almost 4 times the provincial rate of 27.3; the rate of 19.0 for female reserve residents was over twice the provincial female rate of 7.9.

Figure 9
Suicide Rates by Sex, Reserve Residents
Saskatchewan, 1985-86





The age distribution of victims differed markedly between Natives and non-Natives. Youth suicide was a much higher proportion of the total for Natives.

The on-reserve rate for 15-19 year-olds (70.7 per 100,000) was almost 5 times higher than the provincial rate (15.0 per 100,000). The on-reserve suicide rate for 20-29 year-olds (101.5 per 100,000) was over 5 times the provincial rate (19.5 per 100,000).

Table 13
Suicide Rates, Residents of Indian Reserves, by Age and Sex
Saskatchewan, 1985-86

	Number of Suicides			Suicide Rate per 100,000 persons per year	
	Reserve Residents	All Natives	Total Population	Reserve Residents	Total Population
All Victims	29	56	272	38.9	13.3
Victims 15 Years & Over	28	55	270	63.7	17.5
Males	24	37	209	104.8	27.3
Females	4	18	61	19.0	7.9
15-19 years	7	13	24	70.7	15.0
20-29 years	15	25	72	101.5	19.5
30 years & over	6	17	174	31.1	17.2

Alcohol Involvement: The degree of alcohol involvement was comparatively higher for Native victims: 64% of Natives had some alcohol involvement, compared to 42% of non-Natives. The "Acute Involvement" group, in particular, was proportionately higher for Natives.

Table 14
Native Suicides and Involvement with Alcohol
Saskatchewan, 1985-86

Degree of Involvement	Native No.	Native %	Non-Native No.	Non-Native %
Chronic Involvement	13	23.2%	40	18.5%
Acute Involvement	20	35.7%	31	14.4%
Lesser Involvement	3	5.4%	19	8.8%
Total with Involvement	36	64.3%	90	41.7%
No Involvement Detected	20	35.7%	126	58.3%
Total Victims	56	100.0%	216	100.0%

Drugs Other Than Alcohol: Involvement with drugs other than alcohol was less prevalent for Natives than for non-Natives: 34% of Natives having some involvement, compared to 39% for non-Natives.

Table 15
Native Victims and Involvement with Drugs Other Than Alcohol
Saskatchewan, 1985-86

Degree of Involvement	Native No.	Native %	Non-Native No.	Non-Native %
Chronic Involvement	8	14.3%	38	17.6%
Acute Involvement	6	10.7%	21	9.7%
Lesser Involvement	5	8.9%	25	11.6%
Total with Involvement	19	33.9%	84	38.9%
No Involvement Detected	37	66.1%	132	61.1%
Total Victims	56	100.0%	216	100.0%

Summary - Alcohol and Other Drug Involvement:

For both Natives and non-Natives, the involvement of alcohol or other drugs was detected for a majority of the victims. The proportion was higher, however, for Natives (75%) than for non-Natives (64%).

Alcohol alone and in combination with other drugs was much more significant for the Native victims; conversely, non-Natives had higher involvement with other drugs than did Natives.

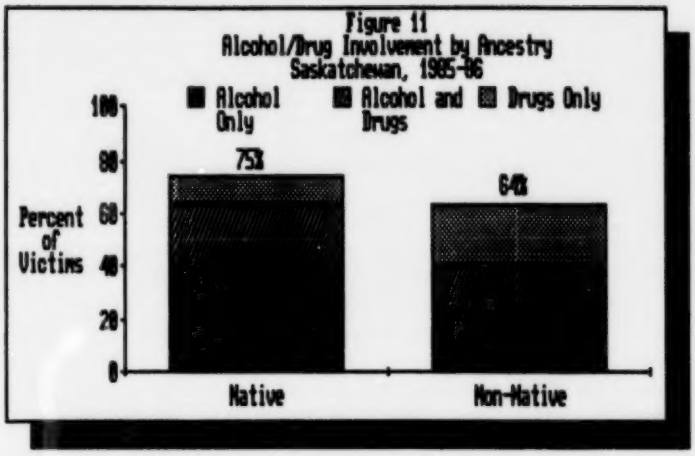


Table 16
Involvement with Alcohol and Other Drugs for Native Victims
Saskatchewan, 1985-86

Type of Involvement	Native	Non-Native
Alcohol Only	41.1%	25.5%
Alcohol & Drugs	23.2%	16.2%
Drugs Only	10.7%	22.7%
Total with Involvement	75.0%	64.4%
Total Number of Victims	56	216

Other Factors: For Natives as for non-Natives, gunshot was the most frequent method employed for effecting the suicide; hanging represented a higher proportion of methods than for non-native persons.

The distribution of reasons for the suicide was somewhat different for Natives than for non-Natives; some of this difference may be attributed to the relative younger age of the Native suicide victims. Family or relationship problems were the most frequent reason identified for the Native group; mental health problems, while contributing a significant 33% to the reasons identified for the Native group, were a lower proportion than they were for non-Natives at 43%. Bereavement was also notably higher for the Native group than for the non-Native group.

Table 17
Reasons Identified for Suicide for Native Victims
Saskatchewan, 1985-86

Reasons Identified	Native	Non-Native
Family/Relationship Problems	41.2%	20.8%
Mental Health Problems	33.3%	43.0%
Bereavement	9.8%	5.4%
Medical Problems	5.9%	11.8%
Legal Problems	3.9%	5.0%
Financial Problems	2.0%	10.9%
Other	3.9%	3.2%
Total	100.0%	100.0%
Total Reasons Identified	51	221

Note: There could be more than one reason per victim.
Total Victims with Identified Reasons: Native-42; Non-Native-168.

The proportion of Native victims who had previously attempted suicide was 16%, higher than the 11% of non-Native victims. While a lower proportion of Natives (13%) than non-Natives (23%) left a suicide note, a higher proportion of Natives (41%) than non-Natives (32%) had either expressed their intention to commit suicide or exhibited a notable behaviour change before their suicide. On the other hand, 32% of non-natives had previous known contacts with "helping" agencies, while only 14% of Natives had such contacts.

Chapter III

The National Task Force on Suicide in Canada

For the past 6 years, suicide has been the focus of research for a special unit, the National Task Force on Suicide in Canada. Health and Welfare Canada established the Task Force to "investigate and better define the dimensions of suicide, and to consider effective strategies of response to the problem" (Task Force, Foreword). Results of their investigation, published in early 1987, have been used extensively in this report. Provided below are those excerpts of the Task Force conclusions and recommendations most pertinent to this study's findings. Numbers in parentheses refer to numbers used in the Task Force report.

> The Task Force makes a series of recommendations. The scope and nature of the recommendations reflect the expertise of the Task Force members. The mental health priorities in any jurisdiction will determine the saliency and urgency of the recommendations. Suicide, however tragic, is a low frequency event having a more limited societal impact than other pressing mental health issues such as the care and treatment of the chronically mentally ill, the mental health needs of victims of violence including battered women and abused or neglected children and the mental health problems associated with aging. In addition, not all the recommendations will apply across Canada. Some may already be incorporated in provincial and local mental health services, or the intent may have been met with service arrangements not anticipated by the Task Force. (Task Force, p.1).
>
> . . . Some of the more relevant conclusions of the Task Force are . . .
>
> *(2) The cost of suicide to Canadian society is enormous, especially when calculated in terms of years of productive life lost.*
>
> *(7) Social factors, medical/psychiatric factors and psychodynamic factors have been variously identified as creating a risk for suicide in vulnerable individuals. Task Force members tend to favour an interactional model of causality as the most probable and, at the same time, reasonable in the light of both research findings and clinical experience.*
>
> *(10) As noted in a World Health Organization Report (1982) "There is ample evidence that social conditions which are amenable to change are the main determinants of suicide." Therefore, while ambitious, steps to ameliorate societal conditions which may contribute to suicide (and other self-destructive behaviours) must be considered.*
>
> (Task Force, p.58).

More specitic Task Force recommendations applying to issues highlighted by the findings in this report are:

Alcohol Abuse:

(17) Efforts to reduce the incidence of alcoholism should be strongly encouraged.

(18) Additional government support should be considered for agencies participating in the treatment of alcoholics and their families.

Youth:

(19) Provincial Ministers of Education should consider the feasibility of developing province-wide mental health programs for adolescent students: focusing on factors crucial to the development of self-confidence and self-esteem, strategies in problem-solving and decision-making, and interpersonal skills.

(20) The treatment of young people who are at risk to suicide should recognize and account for vulnerability factors and environmental influences.

(21) There should be a coordinated effort to identify gaps in counselling and psychiatric services for young people, and to establish programs based on a comprehensive approach to the family and problems of the young.

(22) All deliberately self-inflicted injuries and threats of suicide on the part of young people should be taken seriously, and involve professional assessment and appropriate therapeutic follow-up.

Natives:

(24) The development and implementation of suicide prevention strategies for Canadian Native peoples should be based on a comprehensive and culturally oriented approach.

(25) A liaison and back-up network of mental health consultants should be accessible to all community health workers delivering health education and social services to Native peoples.

Research:

(36) Provincial coroners and medical examiners should be authorized to permit accredited researchers access to individual files and to facilitate further collection of data through local coroners and police.

(37) It is essential that research findings on suicide and parasuicide be disseminated in the health-care system.

(38) Formal research into the effectiveness of training methods should be encouraged on an inter-disciplinary basis for those involved with suicide and suicidal individuals.

(39) Government funding should be increased for research on suicide, and this should be done on a priority basis.

(40) Priority should be given to multi-centre and multi-disciplinary research with particular focus on the various factors (i.e. social integration, isolation, mental disorder, alcoholism, drug abuse, family and educational difficulties) influencing young people who are suicidal.

(Task Force, pp. 59-60).

Chapter IV

Conclusion

The purpose of the Saskatchewan Alcohol and Drug Abuse Commission is to counteract the incidence and prevalence of alcohol and other drug abuse in Saskatchewan. The results of this report indicate that success in this purpose will add to the global effort to decrease the rate of suicide in the province.

Although the exact nature of the relationship between substance abuse and suicide cannot be determined from this study, the results complement other research showing a strong connection between them. Two-thirds of the suicides in the last two years were identified as being in some way alcohol or drug related.

The study also identified specific subgroups of suicides with high alcohol abuse; the high levels of alcohol abuse were among the same groups with high suicide rates: males, 20-29 year-olds and native people. The study also identified the relatively high use of psychotherapeutic drugs, especially among female victims.

The study, however, had many limitations because the information on suicide collected by the Provincial Coroner is designed to establish cause of death, not to supply an in-depth analysis of the reasons for the victim's suicide.

The need for what have come to be termed "psychological autopsies" of suicides has become increasingly evident. Traditional autopsies help establish medical cause of death and provide information as to how that cause may be treated or prevented. Similarly more detailed investigation of each suicide, by persons with psychological and sociological training, would lead to a better ability to predict factors leading to suicide, and more effectiveness in preventing suicide. Done properly, such work would also assist the bereaved families and friends of suicide victims to understand and cope with the tragedy.

It would be presumptuous of SADAC, on the basis of this research alone, to formulate recommendations about the problem of suicide. However, for the past 6 years, suicide has been the focus of research for a special unit, the National Task Force on Suicide in Canada. Provided elsewhere in this report are those excerpts of the Task Force conclusions and recommendations which arise most immediately from the research findings presented here.

SADAC has recently increased its efforts in suicide prevention and is already engaged in activities that are recommended by the Task Force. This report based on investigation of the Provincial Coroner's data is one example. Research in this area is continuing.

Certainly SADAC's major programming area, reducing the incidence of alcohol and drug abuse, is one aspect of suicide prevention; efforts in this area have been increased recently with additional resources to treatment and prevention programs for substance abuse.

Suicide prevention has also become a more specific element of SADAC programming. In June, 1987, SADAC sponsored its first workshop on suicide prevention; the workshop was attended by SADAC treatment staff, as well as by other mental health professionals. One other workshop has been held since that time, and further workshops are planned.

SADAC is committed, in co-operation with others in the mental health field in Saskatchewan, to lessening the tragedy of suicide.

Notes

National historical trends for suicide rates were obtained from the Report of the National Task Force on Suicide in Canada (1987). Rates were not age-standardized. National historical data on Native suicide were not available.

Suicide rates for the total Saskatchewan population were based on Statistics Canada population estimates. The population on December 1985 was used as a base, calculated by averaging June, 1985 and June, 1986 postcensal estimates.

Population rates for residents of Saskatchewan Indian Reserves were based on population data provided by the Department of Indian and Northern Affairs for Indians residing on reserves or on crown land as of December 1985.

The suicides documented by the Provincial Coroner represent all suicides which occurred in Saskatchewan. These will include some suicides occurring in Saskatchewan to non-residents of the province, and exclude suicides by residents occurring outside the province. However, such victims are few (2 or 3 per year).

In the analysis of data from the Coroner's records, unless noted otherwise, the proportion of any characteristic was taken over all cases. The counts and proportions represent "detections" only, and are therefore conservative measures.

A technical report providing more detail about the content and methodology of the study is available from SADAC upon request.

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SADAC INFORMATION REQUEST

Suicide Prevention Workshop

SADAC sponsors workshops on suicide prevention, open to caregivers and individuals in the community who want to increase their knowledge in this area.

If you would like more information about the next workshop, please complete and return the form below.

I would like more information about SADAC Suicide Prevention Workshops:

Name_____

Agency_____

Position_____

Business Address _____

_____

Business Phone _____

Home Phone _____

Return the form to:

SADAC
3475 Albert Street
Regina, Saskatchewan
S4S 6X6